

### 4.1.1 BLASTING

**NOTE:** Section 4.1.1 is reserved. Standards may be drafted as part of a later phase of the Land Development Code, if regulation in addition to existing State requirements is deemed necessary.

### 4.1.2 FACTORY BUILT HOUSING

Factory built housing may be placed on a lot zoned for residential use, in accordance with applicable zoning and form district requirements and provided that the standards of this section are met.

**NOTE:** Factory built housing includes manufactured homes and modular homes as defined in the 2002 Kentucky Residential Code.

- A. The following standards are applicable to all factory built housing:
  - 1. The structure shall be permanently attached to a permanent foundation system and shall be anchored in accordance with the state standards set forth in KRS 227.570 through KRS 227.590.
  - 2. Exterior material shall be material customarily used on site-built dwellings, such as board siding, plywood or press wood siding, non-glossy vinyl siding, stucco, brick or non-reflective aluminum.
  - 3. Roofing material shall be of wood, tile or composition shingles, and must have an eave projection of no less than 6 inches.
  - 4. Exterior covering material extending from the roofline to the ground or to the top of the foundation shall be used. Masonry type skirting shall be constructed from the ground to the bottom of the exterior wall.
  - 5. Structural additions or alterations shall be subject to the same building code regulations as apply to additions or alterations to a conventionally built house. Any other alteration or conversion of a factory built house must be performed in accordance with KRS 227.550 et seq., 815 KAR 25:050, Section 2 and 42 USC Chapter 70.
  - 6. An adequate guttering and roof drainage system shall be installed.
- B. The following standards are applicable to all factory built housing to be placed on lots that qualify as infill sites in the form district regulation applicable to the site:

**NOTE:** *Infill development is defined in the Neighborhood and Traditional Neighborhood Form Districts:*

*Infill in NFD:* *Where 50% or more of either the lots or street frontage (lineal distance) within 200 feet of the subject site and on the same side of the street are occupied by principal structures.*

*Infill in TNFD:* *Where 50% or more of either the lots or street frontage (linear distance) within the same block face are occupied by principal structures]*

1. Roofed front porches must be included on each structure if more than 50% of the structures in the same block face or within 200 feet of the subject site, whichever is less, include them. Porches shall , equal the average size and must resemble the architectural style, roof pitch, foundation and façade material of porches existing within the block face. The Planning Director shall determine if the proposed porch design is sufficiently similar to those of adjacent residences.
2. Façade materials shall match in appearance<sup>1</sup> those of one of the adjacent residences (residential buildings on either side of the infill lot, or two nearest residences, if the adjacent structures are non-residential). The Planning Director may approve alternative materials, if the Director finds that the proposed design and façade materials are substantially in keeping with the existing character of the block face.
3. Front facing windows must have consistent size, spacing, and proportion to that of the adjacent residences (residential buildings on either side of the infill lot, or two nearest residences, if the adjacent structures are non-residential). The Planning Director may approve alternative window sizes and patterns, that the Director determines are in keeping with the existing character of the block face.
4. The first floor elevation of the proposed dwelling shall be no lower than the average floor elevations of the existing adjacent residential buildings (residential buildings on either side of the infill lot, or two nearest residences, if the adjacent structures are non-residential).
5. Minimum width of each unit's first story shall be at least equal to the average of the two nearest residential buildings in the same block face (residential buildings on either side of the infill lot, or two nearest residences, if the adjacent structures are non-residential).

<sup>1</sup> For example, an infill structure with four inch vinyl lapped siding may locate next to a home with wood lapped siding of similar dimension.

6. The roof of each infill unit shall have pitch at least as steep as the average of the roof pitch of the two nearest residential buildings in the same block face. The Planning Director may approve a lower roof pitch if the Director finds that the adjacent roof pitches are not representative of the block face in which the factory built home is to be located.
  7. Infill structures shall be consistent in number of stories with the pattern established by surrounding residences; if more than 50% of existing residences within the block face (TNFD) or 200 feet distance (NFD) are more than one story in height, the infill structure shall be a two-story structure. Where the established pattern is story and a half (e.g., "camelback structures"), infill housing may have a full or partial second story.
  8. HVAC units shall not be located between the front façade and the street.
  9. In Landmarks Districts, design review and approval by the Landmarks Commission shall substitute for the requirements established in paragraphs B.1 through 8, above.
  10. The Planning Director may approve proposed developments of five or more infill units that vary from the standards listed in this 4.1.3.B, if the Director finds that the units are compatible with the neighborhood in which they will be located.
- C. The following standards are applicable to all factory built housing to be placed on lots that do not qualify as infill sites in the form district regulation applicable to the site:
1. The roof shall be pitched at a minimum slope of 5:12.
  2. The minimum width of each structure's first floor shall be at least 20 feet. In the TNFD, 14 wide units are permissible, if the unit has a second story (full or partial) and has a main entrance facing the street.
  3. HVAC units shall not be located between the front façade and the street.
  4. Each residence must measure at least 900 square feet of floor area not including basement or garage space.
- D. The Planning Commission may approve factory built housing that does not conform to one or more of the standards listed in sub-sections 4.1.2.B or C, above, if the Commission finds that the proposed housing:
- is compatible with existing housing located within a one-eighth mile radius;
  - complies with applicable standards of the form district in which it is located; and conforms to applicable provisions of Cornerstone 2020.

### 4.1.3 LIGHTING

#### A. Purpose and Intent

The purpose of this section is to appropriately regulate outdoor lighting in Louisville and Jefferson County to reduce the effects of light trespass and glare, provide clear guidelines for the installation of outdoor lighting to maintain and compliment the community's character, and to provide a safe nighttime environment for pedestrians, motorists, and properties. This regulation will implement the following Cornerstone 2020 Community Form Strategy Goals and Objectives: A3.1, A3.4, B2.6, C2.5, C4.6, D4.3, E2.4, E4.3, F4.4, G2.4, G4.3, H2.5, and H4.3.

It is the intent of this regulation to provide for the health, safety and welfare of the residents of Jefferson County by regulating the placement, hours of operation, orientation, distribution patterns, intensity, and fixture types of all outdoor lighting used for the illumination outside the public right-of-way while encouraging lighting that conserves energy, reduces light pollution, and enhances nighttime enjoyment of the property within the County, without decreasing safety, utility, security, and productivity.

The following definitions are not a part of this Chapter, but are included to allow for the review of this Part without referring to other portions of this Land Development Code.

Direct Light = light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

Fixture = the assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.

Flood Light = a form of lighting fixture designed to direct the output of a contained lamp in a more-or-less specific direction, utilizing reflecting or refracting elements located external to the lamp.

Footcandle = the unit of illuminance on a surface one square foot in area on which there is a uniformly distributed flux of one lumen, or the illuminance produced on a surface all points of which are at a distance of one foot from a directionally uniform point source of one candela.

Fully-Shielded Light Fixture (also known as Full-cutoff) = a lighting fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal and meets IESNA criteria for fully-shielded (or full-cutoff) fixtures. Any structural part of the light fixture controlling light emissions must be permanently affixed.

Glare = light emitting from a luminaire with an intensity great enough to reduce a viewer's ability to see, and in extreme cases causing momentary blindness.

Height of Luminaire = the height of a luminaire shall be the vertical distance from the ground directly below the centerline of the luminaire to the lowest direct-light-emitting part of the luminaire.

Indirect Light = direct light that has been reflected or has scattered off of other surfaces.

Lamp = the component of a luminaire that produces the actual light.

Landscaping Lighting = type of outdoor lighting used to illuminate landscaping areas (flower beds, trees, vegetation) and other aesthetic features on a parcel (flag poles, etc.).

Light Trespass = the shining of light produced by a luminaire beyond the boundaries of the property on which it is located.

Lumen = a unit of luminous flux. One footcandle is one lumen per square foot. For the purposes of this Regulation, the lumen-output values shall be the INITIAL lumen output ratings of a lamp.

Luminaire = a complete lighting system, and includes a lamp or lamps and a fixture (*See Appendix 4A for examples of acceptable luminaires*).

Outdoor Lighting = the night-time illumination of an outside area or object by any man-made device located outdoors that produces light by any means. This includes luminaires used to illuminate advertising signs, landscaping, architectural features, walkways, driveways and parking areas.

Sag-lens or Drop-lens = a clear or prismatic refracting lens that extends below the lowest opaque portion of a light fixture.

Shielded (also known as cutoff) Light Fixture = a lighting fixture constructed in such a manner that no more than 2.5 percent of the lamp lumens, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, are not emitted above the horizontal plane through the lowest direct-light-emitting part of the luminaire.

Spotlight = a lighting assembly designed to direct the output of a contained lamp in a specific tightly focused direction (a beam) with a reflector located external to the lamp.

Temporary Outdoor Lighting = the specific illumination of an outside area or object by any man-made device located outdoors that produces light by any means for a period of less than 15 days, with at least 180 days passing before being used again.

Uniformity Ratio = the relationship between the average level of illumination and the lowest level of illumination for a given area. For example, if the uniformity ratio is 3:1 and the average illumination of an area is 3.0 footcandles, then the lowest level of illumination allowed in the given area would be 1.0 footcandles.

### B. Regulations

1. All public and private outdoor lighting shall be in conformance with the requirements established by this Regulation.
2. Control of Glare – Luminaire Design Factors
  - a. All luminaires shall be aimed, directed, or focused such as to not cause direct light from the luminaire to be directed toward residential uses or protected open spaces (i.e., conservation easements, greenways, parkways) on adjacent or nearby parcels, or to create glare perceptible to persons operating motor vehicles on public streets and right-of-way.
  - b. The following items shall apply to the mounting height of luminaires:
    - i. Within the Neighborhood or Village form district or within a form district transition zone related to a Neighborhood or Village form district, any luminaire with a lamp or lamps rated at a total of more than 1800 lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than 900 lumens shall be mounted at a height equal to or less than thirty (30) feet unless otherwise approved by the Planning Commission.
    - ii. Within the Traditional Neighborhood, Traditional Workplace, or Traditional Marketplace Corridor form district or within a form district transition zone related to the Traditional Neighborhood, Traditional Workplace or Traditional Marketplace Corridor form district, any luminaire with a lamp or lamps rated at a total of more than 1800 lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than 900 lumens shall be mounted at a height equal to or less than twenty (20) feet unless otherwise approved by the Planning Commission.
    - iii. Luminaires mounted on residential structures shall be exempt from items (i.) and (ii.) above.
  - c. Shielding
    - i. In the Neighborhood, Traditional Neighborhood or Village form districts, or within a form district transition zone related to the Neighborhood, Traditional Neighborhood or Village form districts, luminaires that emit more than 7,000 lumens shall be fully-shielded luminaires so that they do not emit any direct light above a horizontal plane through the lowest direct-light-emitting part of the luminaire.

- ii. In all other form districts or form district transition zones, luminaires that emit more than 7,000 lumens shall be shielded luminaires so that they do not emit more than 2.5 percent of the lamp lumens above the horizontal plane through the lowest direct-light-emitting part of the luminaire.
3. Exceptions to Control of Glare
  - a. Street lights, including all lights installed by or funded by government agencies shall be exempt from the provisions of this section.
  - b. All hazard warning luminaires required by Federal regulatory agencies are exempt from the requirements of this article, except that all luminaires must meet all Federal design standards and must be shown to be as close as possible to the Federally required minimum lumen output requirement for the specific task. Strobe lights shall be permitted only if there is no other federally approved hazard warning illumination technique.
  - c. Luminaires used primarily for sign illumination shall not extend more than one foot above the sign which they are lighting.
  - d. Decorative luminaires installed in public parks shall be shielded so as to not cause direct light from the luminaire to affect residential uses or to create glare perceptible to persons operating motor vehicles on public streets, however these luminaires are not subject to the shielding requirements of paragraph 2.c, above.
  - e. Law Governing Conflicts. Where any provision of federal, state, county, or city statutes, codes, or laws conflicts with any provision of this code, the most restrictive shall govern unless otherwise regulated by law.
4. Freestanding Business Signs
  - a. Lighting fixtures used to illuminate a freestanding business sign shall be mounted on the top of the sign structure and directed towards the ground. Freestanding business signs with bottom-mounted lighting shall only be used if the fixtures are pointed directly at the sign.
  - b. Freestanding business signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding.
5. Canopy, Pavilion, or Drive-Through Bays Lighting
  - a. All luminaires mounted on or recessed into the lower surface of canopies, pavilions, or drive-through bays shall be fully shielded and utilize flat lenses.

- b. The following maximum illumination levels shall apply to canopy, pavilion or drive-through bay lighting:
      - i. The level of lighting shall not exceed 50 footcandles at any point beneath a canopy, pavilion, or drive-through bay located in the Neighborhood, Traditional Neighborhood, Traditional Workplace, Traditional Marketplace Corridor and Village form districts.
      - ii. In all other form districts, the level of lighting shall not exceed 70 footcandles at any point beneath a canopy, pavilion, or drive-through bay.
    - c. In all form districts, all canopy, pavilion, or drive-through bay lighting shall maintain a uniformity ratio of 4:1.
- 6. Recreational Facilities
  - a. Any light source permitted by this Code may be used for lighting of outdoor recreational facilities (public or private), such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, or equestrian arenas, provided all of the following conditions are met:
    - i. All fixtures used for recreational facilities lighting within 500 feet of any residential use shall be fully shielded, or be designed or provided with sharp cut-off capability, so as to minimize up-light, spill-light, and glare.
    - ii. Illumination of any playing field, court, or track located within 500 feet of any residential use shall be permitted after 11:00 p.m. only to conclude an event normally expected to end before 11:00 p.m. and circumstances prevented concluding before 11:00 p.m.
  - c. Recreational facilities shall be required to submit a lighting plan for review and approval by the Planning Commission.
 

The plan shall document the effect of lighting on adjacent residential areas. The Planning Commission may require modification of the lighting plan or impose conditions on its approval as necessary to mitigate the impacts of the lighting.
- 7. Pedestrian Areas
  - a. Pedestrian facilities (sidewalks, paths, etc.) leading from a building to parking facilities shall not exceed an average lighting level of 2.5 footcandles.
  - b. Luminaires used only to illuminate pedestrian facilities shall not be mounted higher than 15 feet from the finished grade of the walking surface.



## 8. Temporary Lighting

Temporary lighting shall be permitted in accordance with the following guidelines:

- a. The purpose for which the lighting is proposed is not intended to extend beyond fifteen (15) days.
- b. The proposed lighting is designed in such a manner as to minimize light pollution and light trespass.
- c. The proposed lighting will comply with the general intent of this regulation.
- d. The permit will be in the public's best interest.

## 9. Prohibitions\*

- a. The use of search lights except by civil authorities is prohibited.
- b. Fixtures with drop or sag lens lighting are prohibited.

*Note: This does not prohibit the use of holiday lighting.*

Flashing and strobe lights employed to draw attention to business establishments, special events, etc. are prohibited. Please see Section 4.3.2 C.1 for information regarding federal hazard warning luminaries.

## 10. Architectural Lighting

- a. Architectural lighting used to illuminate building facades, walls, landscaping, flags, fountains, statues, or other architectural or design items shall be carefully located and aimed so that light is directed only onto the surface of the building façade, wall, landscaping, flag, fountain, statue or other architectural or design item it is intended to light.
- b. Architectural lighting used to illuminate building facades, walls, landscaping, flags, fountains, statues, or other architectural or design items shall not create glare for traffic on streets or roads.

## 11. Light Trespass

- a. The following provisions shall apply to light trespass:

- i. The level of lighting resultant from luminaires installed on a subject site shall not exceed one-half (0.5) footcandles at any property border adjoining a low- to medium-density residentially zoned or used<sup>2</sup> property border, and 1.0 footcandles on any high-density residentially zoned or used<sup>3</sup> property border, or public right of way parcel of land.
- ii. If the ambient level of lighting at any property border exceeds one-half (0.5) footcandles prior to the development of the subject site, then the level of lighting resultant from luminaires installed on that site shall not increase the ambient level of lighting at any property border by more than one-half (0.5) footcandles.
- b. In all zoning and form districts, any lighting shall be arranged so as not to shine directly on an adjoining property.

### C. Permit Required

- 1. Whenever a person is required to obtain a building or electrical permit, a Conditional Use Permit, or any development plan approval by the County, the applicant shall, as a part of said application, submit sufficient information to enable the permit issuing agency to determine whether the proposed lighting will comply with this Regulation.

### D. Enforcement and Penalty

- 1. The following standards shall be used when measuring and inspecting outdoor lighting complaints:
  - a. When inspecting light fixtures the inspector shall do a visual evaluation to determine whether the fixture meets the requirements established in this Regulation.
  - b. When inspecting light trespass complaints, the inspector shall use an approved instrument to take a footcandle reading to determine whether the light brightness exceeds the standards set in this regulation. The inspector shall stand at the property line (as mapped on PVA maps) and hold the detector approximately three (3) feet off the ground. The inspector shall take measurements on the horizontal plane to assure proper measurement of light at the property line. The average of the vertical and horizontal measurements shall be used to determine compliance with applicable standards. (not in effect within Louisville Metro)

<sup>2</sup> “Low- to medium-density residentially zoned” parcels include R-R, R-E, R-1, R-2, R-3, R-4, R-5, PRD, PVD R-5A, and R-5B.

<sup>3</sup> “High-density residentially zoned” parcels include TNZD, U-N, R-6, R-7, and R-8A.

- b. When inspecting light trespass complaints, the inspector shall use an approved instrument to take a footcandle reading to determine whether the light brightness exceeds the standards set in this regulation. The inspector shall stand at the property line (as mapped on PVA maps) and hold the detector approximately three (3) feet off the ground. The inspector shall take measurements on the horizontal plane to assure proper measurement of light at the property line. The average of the vertical and horizontal measurements shall be used to determine compliance with applicable standards. Measurement of light brightness under gasoline canopies shall be measured under the canopy at a height of three (3) feet (in effect within).

### E. Severability

1. Should any section, clause or paragraph of this regulation be declared by court of competent jurisdiction to be invalid, the same will not affect the validity of the regulation as a whole or part hereof other than the part declared to be invalid.

### F. Effective Date

1. This regulation shall take effect from and after its passage, approval and publication according to law.
2. Amortization/Alternative Provisions (Reserved)

### G. Installation

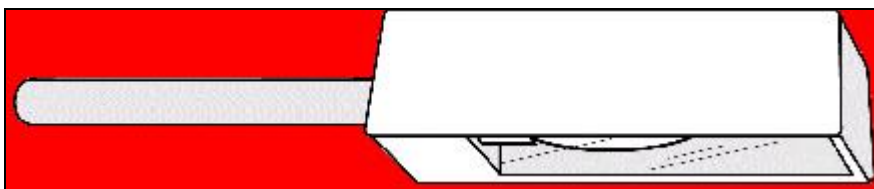
1. The owner or contractor of record shall install the approved outdoor lighting fixtures in conformance to the listing, manufacturer's specifications, and all applicable local building and electrical codes. An electrical permit and inspection by the permit-issuing agency is required.

### H. Modifications, Waiver or Variation

Waivers may be granted in accordance with Chapter 11 Part 8.

### I. Illustrations

Example of a fully-shielded or full-cutoff light.



### 4.1.4 Noise

**NOTE:** Section 4.1.4 is reserved. Noise standards may be drafted as part of a later phase of the Land Development Code, if regulation in addition to the existing noise ordinance is deemed necessary.

**4.1.5 Odor**

Refer to applicable regulations administered by the Air Pollution Control District.

**4.1.6 Operating Hours**

The following operating hour restrictions shall apply to all uses that are within 100 feet of any property that is zoned residential, any solely residential use or any mixed use development that contains residential uses on the ground floor as measured from the closest property line of the proposed use.

- A. Collection of Garbage and Recyclables - No garbage or recyclables collection services shall be conducted between the hours of 10:00 p.m. and 7:00 a.m.
- B. Loading Operations - No loading or unloading operations shall be conducted between the hours of 10:00 p.m. and 7:00 a.m. This restriction shall also be applicable to the idling of any heavy or medium trucks on the site for the purpose of conducting loading or unloading operations regardless of whether said activities have already occurred or are scheduled to occur in the future.